

See "Instructions for Filling out the Work Permit" contained in the Work Planning and Control for Experiments and Operations Subject Area.

**1. Work request WCC fills out this section.**

☐ Standing Work Permit

Requester: Don Lynch	Date: 3/7/2013	Ext.: 2253	Dept/Div/Group: PO/PHENIX
Other Contact person (if different from requester): Carter Biggs			Ext.: 7515
Work Control Coordinator: Don Lynch		Start Date: 3/8/2013	Est. End Date: 3/31/2013
Brief Description of Work: Reduce the supply temperature for RPC1 North and South Detectors by using portable AC units to pre cool blower supply air			
Building: 1008	Room: IR	Equipment: RPC1, portable AC units	Service Provider PHENIX Techs

**2. WCC, Requester/Designee, Service Provider, and ESS&H (as necessary) fill out this section or attach analysis**

<b>ESS&amp;H ANALYSIS</b>			
<b>Radiation Concerns</b>	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Activation	<input type="checkbox"/> Airborne
	<input type="checkbox"/> Contamination	<input type="checkbox"/> Radiation	<input type="checkbox"/> NORM
	<input type="checkbox"/> Other		
<input type="checkbox"/> Special nuclear materials involved, notify Isotope Special Materials Group			
<input type="checkbox"/> Fissionable/Radiological materials involved, notify Laboratory Nuclear Safety Officer			
<b>Radiation Generating Devices:</b>	<input type="checkbox"/> Radiography	<input type="checkbox"/> Moisture Density Gauges	<input type="checkbox"/> Soil Density Gauges
	<input type="checkbox"/> X-ray Equipment		
<b>Safety and Security Concerns</b>	<input type="checkbox"/> None	<input type="checkbox"/> Explosives	<input type="checkbox"/> Transport of Haz/Rad Material
	<input type="checkbox"/> Pressurized Systems		
<input type="checkbox"/> Adding/Removing Walls or Roofs	<input type="checkbox"/> Critical Lift	<input type="checkbox"/> Fumes/Mist/Dust*	<input type="checkbox"/> Magnetic Fields*
	<input type="checkbox"/> Railroad Work		
<input type="checkbox"/> Asbestos*	<input type="checkbox"/> Cryogenic	<input type="checkbox"/> Heat/Cold Stress	<input type="checkbox"/> Nanomaterials/particles*
	<input type="checkbox"/> Rigging		
<input type="checkbox"/> Beryllium*	<input type="checkbox"/> Electrical	<input type="checkbox"/> Hydraulic	<input type="checkbox"/> Noise*
	<input type="checkbox"/> Silica*		
<input type="checkbox"/> Biohazard*	<input type="checkbox"/> Elevated Work	<input type="checkbox"/> Lasers*	<input type="checkbox"/> Non-ionizing Radiation*
	<input type="checkbox"/> Security Concerns		
<input type="checkbox"/> Chemicals/Corrosives*	<input type="checkbox"/> Excavation	<input type="checkbox"/> Lead*	<input type="checkbox"/> Oxygen Deficiency*
	<input type="checkbox"/> Suspect/Counterfeit Items		
<input type="checkbox"/> Confined Space*	<input type="checkbox"/> Ergonomics*	<input type="checkbox"/> Material Handling	<input type="checkbox"/> Penetrating Fire Walls
	<input type="checkbox"/> Vacuum		
* Safety Health Rep. Review Required	<input type="checkbox"/> Haz, Rad, Bio Material Exceed DOE 151.1-C Levels - Contact OEM		<input checked="" type="checkbox"/> Other Use interlocked electrical supply
<b>Environmental Concerns</b>			
	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Work impacts Environmental Permit No.	
<input type="checkbox"/> Atmospheric Discharges (rad/non-rad)	<input type="checkbox"/> Land Use Institutional Controls	<input type="checkbox"/> Soil Activation/contamination	<input type="checkbox"/> Waste-Mixed
	<input type="checkbox"/> Waste-Clean	<input type="checkbox"/> Waste-Radioactive	
<input type="checkbox"/> Chemical or Rad Material Storage or Use	<input type="checkbox"/> Liquid Discharges	<input type="checkbox"/> Waste-Hazardous	<input type="checkbox"/> Waste-Regulated Medical
	<input type="checkbox"/> Oil/PCB Management	<input type="checkbox"/> Waste-Industrial	<input type="checkbox"/> Underground Duct/Piping
<input type="checkbox"/> Cesspools (UIC)	<input type="checkbox"/> Spill potential	<input type="checkbox"/> Other	
<input type="checkbox"/> High water/power consumption			
Waste disposition by:			
<b>Pollution Prevention (P2)/Waste Minimization Opportunity:</b>	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
<b>FACILITY CONCERNS</b>			
	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Intermittent Energy Release	
<input type="checkbox"/> Access/Egress Limitations	<input type="checkbox"/> Electrical Noise	<input type="checkbox"/> Potential to Cause a False Alarm	<input type="checkbox"/> Vibrations
	<input type="checkbox"/> Impacts Facility Use Agreement	<input type="checkbox"/> Temperature Change	<input type="checkbox"/> Other
<input type="checkbox"/> Configuration Management	<input type="checkbox"/> Maintenance Work on Ventilation Systems	<input type="checkbox"/> Utility Interruptions	
<b>WORK CONTROLS</b>			
<b>Work Practices</b>			
<input type="checkbox"/> None	<input type="checkbox"/> Exhaust Ventilation	<input type="checkbox"/> Lockout/Tagout	<input type="checkbox"/> Spill Containment
	<input type="checkbox"/> Security (see Instruction Sheet)		
<input checked="" type="checkbox"/> Back-up Person/Watch	<input type="checkbox"/> HP Coverage	<input type="checkbox"/> Posting/Warning Signs	<input type="checkbox"/> Time Limitation
	<input type="checkbox"/> Other		
<input type="checkbox"/> Barricades	<input type="checkbox"/> IH Survey	<input type="checkbox"/> Scaffolding-requires inspection	<input type="checkbox"/> Warning Alarm (i.e. "high level")
	<input type="checkbox"/> Electrical Inspection Required		
<b>Personal Protective Equipment</b>			
<input type="checkbox"/> None	<input type="checkbox"/> Ear Plugs	<input checked="" type="checkbox"/> Gloves as appropriate	<input type="checkbox"/> Lab Coat
	<input type="checkbox"/> Safety Glasses as appropriate		
<input type="checkbox"/> Coveralls	<input type="checkbox"/> Ear Muffs	<input type="checkbox"/> Goggles	<input type="checkbox"/> Respirator*
	<input type="checkbox"/> Safety Harness		
<input type="checkbox"/> Disposable Clothing	<input type="checkbox"/> Face Shield	<input type="checkbox"/> Hard Hat	<input type="checkbox"/> Shoe Covers
	<input checked="" type="checkbox"/> Safety Shoes	<input type="checkbox"/> High visibility cloths/vest	<input type="checkbox"/> Other
<b>Permits Required</b> (Permits must be valid when job is scheduled.)			
<input checked="" type="checkbox"/> None	<input type="checkbox"/> Cutting/Welding	<input type="checkbox"/> Impair Fire Protection Systems	
<input type="checkbox"/> Concrete/Masonry Penetration	<input type="checkbox"/> Digging/Core Drilling	<input type="checkbox"/> Rad Work Permit-RWP No	
<input type="checkbox"/> Confined Space Entry	<input type="checkbox"/> Electrical Working Hot	<input type="checkbox"/> Other	
<b>Dosimetry/Monitoring</b>			
<input checked="" type="checkbox"/> None	<input type="checkbox"/> Heat Stress Monitor	<input type="checkbox"/> Real Time Monitor	<input type="checkbox"/> TLD
<input type="checkbox"/> Air Effluent	<input type="checkbox"/> Noise Survey/Dosimeter	<input type="checkbox"/> Self-reading Pencil Dosimeter	<input type="checkbox"/> Waste Characterization
<input type="checkbox"/> Ground Water	<input type="checkbox"/> O <sub>2</sub> /Combustible Gas	<input type="checkbox"/> Self-reading Digital Dosimeter	<input type="checkbox"/> Other
<input type="checkbox"/> Liquid Effluent	<input type="checkbox"/> Passive Vapor Monitor	<input type="checkbox"/> Sorbent Tube/Filter Pump	
<b>Training Requirements</b> (List specific training requirements)			
<b>PHENIX Awareness, CA Access or equiv.</b>			
Based on analysis above, the Review Team determines the risk, complexity, and coordination ratings below:		If using the permit when all hazard ratings are low, only the following need to sign: ( Although allowed, there is no need to use back of form)	
<b>ESS&amp;H Risk Level:</b>	<input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High	WCC:	Date:
<b>Complexity Level:</b>	<input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High	Service Provider:	Date:
<b>Work Coordination:</b>	<input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High	Authorization to start	Date:
(Department/Division, or their equivalent, Sup/WCC/Designee)			

**3. Both work requester and service provider contribute to work plan (use attachments for detailed plans)**

**Work Plan** (procedures, timing, equipment, scheduling, coordination, notifications, and personnel availability need to be addressed in adequate detail): See Attached email describing the project and tasks to be performed. All are worker planned work and do not require a detailed written procedure.

Special Working Conditions Required (e.g., Industrial Hygiene hold points or other monitoring)

None

Notifications to operations and Operational Limits Requirements: None

Post Work Testing, Notification or Documentation Required:

Job Safety Analysis Required: ☐ Yes ☒ No

Review Done: ☒ in series ☐ team

**Reviewed by:** \* Primary Reviewer signature means that the Review Team members were appropriate for the work that was planned, the Team visited the job site, hazards and risks that could impact ESS&H have been considered and controls established according to BNL requirements. In addition, this signature indicates that applicable JRAs, FRAs, as well as other planning documents have been reviewed and training requirements have been identified and recorded on this permit.

Title	Name (print)	Signature	Life #	Date
ES&H Professional				
F&O Facility Project Manager				
Service Provider				
Work Control Coordinator	Don Lynch		20146	
Safety Health Representative				
Research Space Manager				
Other				
Other (PHENIX Escort)				
Required Walkdown Completed				
*Primary Reviewer				

**4. Job site personnel (Supervisor and workers) fill out this section.**

Note: Signature indicates personnel performing work have read and understand the hazards and permit requirements (including any attachments) and all training required for this permit is current/complete. Job Supervisor/Contractor Supervisor signatures also includes verification that worker training required for this permit is current/complete.

Job Supervisor:		Contractor Supervisor:	
Workers:	Life#:	Workers :	Life#:

Workers are encouraged to provide feedback on ESS&H concerns or on ideas for improved job work flow. Use feedback form or space below.

**5. Department/Division, or their equivalent, Line Manager or Designee**

Conditions are appropriate to start work: (Permit has been reviewed, work controls are in place and site is ready for job.)

Name:	Signature:	Life#:	Date:
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**6. Worker provides feedback.**

**Worker Feedback (use attached sheets as necessary)**

a) WCM/WCC: Are there any changes as a result of worker feedback? ☐ Yes ☐ No

Note: See Work Planning and Control for Experiments and Operations Subject Area section 2.6.

**7. Post Job Review/Closeout: Work Control Coordinator (authorizing dept.) checks quality of completed permit and ensures the work site is left in an acceptable condition. (WCC can delegate clean up of job site to work supervisor.)** The WCC ensures that the change process to update drawings, placards, postings, procedures, etc., is initiated, if necessary.

Name:	Signature:	Life#:	Date:
Comments:			

**Lynch, Don**

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**From:** Francesca Giordano [fgiord@illinois.edu]  
**Sent:** Friday, March 01, 2013 3:11 PM  
**To:** O'Brien, Edward  
**Cc:** Makdisi, Yousef I; Phillips, David B; Lynch, Don; Biggs, John C  
**Subject:** Re: RPC1 cooling

Dear all,  
 here a summary of today meeting.

I think everybody agreed on the stabilizing effect of the small AC units we are using right now in the North.

1. There was the suggestion to measure the flow and pressure of the blowers we presently have to check which is the max flow that can go through the small space between the rpc1 and MuTr. Carter will do this during next access.
2. Carter will also look for a AC unit in 1008 that apparently nobody is using at the moment, if he found it we might be able to install it in the IR during next access.
3. The AC units to be used will be placed out of flamable gas dangerous zone (behind South magnet and below North magnet), and will need to be automatically tripped off in case of problems.
4. No decision has been made regarding buying new AC units for the moment, we might want to wait for the results from point 1, and the effect of point 2 before proceeding to new purchases. I think we should decide soon if we want to buy more AC units, as if I understood correctly the time needed for a purchase can be at least a couple of weeks.

Please let me know if I forgot to mention anything.

Cheers,  
 Francesac

On 3/1/13 10:28 AM, Edward O'Brien wrote:

Francesca,  
 I am not available then, but please hold the meeting without me. We need to resolve this quickly, before the start of Physics running. Thanks.

Ed

On 3/1/2013 8:53 AM, Francesca Giordano wrote:

If everybody agrees, let's meet today at 2pm in 1008?

Francesca

On 2/28/13 4:49 PM, Makdisi, Yousef I wrote:

Francesca,  
I am available tomorrow if need be.

Yousef

On 2/28/13 2:50 PM, "Francesca Giordano" <[fgiord@illinois.edu](mailto:fgiord@illinois.edu)> wrote:

Dear all,  
I would like to discuss a few tests we have done in the last couple of weeks about how to improve the rpc1 temperatures. Would it be possible to have a meeting tomorrow or early next week to discuss the tests and agree on the next steps?  
Let me know when you are available please.

Thanks,  
Francesca